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P56922

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EXAMINER

ZHU, BO HUI ALVIN

ART UNIT

PAPER NUMBER

2616

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/721,173	Applicant(s) RUE, SEON-SOO	
	Examiner Bo Hui A. Zhu	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 November 2003.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-29 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it exceeds 150 words. Correction is required. See MPEP § 608.01(b).

Drawings

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 29 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

A claim drawn to a "computer-readable medium having stored thereon a data structure" does not constitute statutory subject matter such as a process, machine,

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article of manufacture or composition of matter. In contrast, a claimed computer-readable medium encoded or embodied with a computer program product of code, or instructions, is a computer element which, when executed by a computer, defines structural and functional interrelationships between the instructions and the computer to permit the instructions functionality to be realized, and is thus statutory. Please see pages 30 and 53 of the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 – 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 – 29, it is not clear how “idle state” is defined for access points. In other words, it is not clear what type of access points are considered as being in idle state in the claims, and there is a lack of supportive description in the specification that would give a clear definition of the subject matter.

Regarding claim 5, claim 5 recites the limitations “the authentication failure message” and “the authentication request” in lines 1 and 2 of the claim. There is insufficient antecedent basis for these limitations in the claim.

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Regarding claim 7, claim 7 recites the limitations "the authentication failure message" and "the authentication request" in lines 1 and 2 of the claim. There is insufficient antecedent basis for these limitations in the claim.

Regarding claim 9, claim 9 recites the limitation "when intercepting the access of the wireless local area network terminals" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 11, claim 11 recites the limitation "when intercepting the access of the wireless local area network terminals" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 7, 11, 13, 15 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Eriksson et al. (US 2001/0012778).

(1) with regard to claims 1, 13 and 23:

Eriksson et al. discloses a system and method, comprising: a plurality of wireless local area network terminals having wireless local area network interfaces and receiving a wireless local area network service (mobile terminal 245 on Fig. 2; although one mobile terminal is shown in a cell, it is inherent that each cell 110b controlled by a BSC

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150 has more than one such mobile terminal); a plurality of access points providing the wireless local area network service to the wireless local area network terminals (BSCs, 150 and 155 on Fig. 2), periodically transmitting load state information (paragraph [0028], load indication message is periodically transmitted), and suppressing an increase of load when a load suppressing signal is received (paragraph [0030], the RUN of the cell is below the predetermined threshold is the load suppressing signal, when that signal is received); and a management system comparatively evaluating load states of each access point by receiving the load state information from the access points, and transmitting a load increase suppressing signal to access points whose load values are more than a threshold value, when there are access points whose load values are more than the threshold value and other access points around the access points whose load values are more than the threshold value are in idle state (paragraph [0030], the signal for ordering the cell whose RUN is greater than a threshold to transfer an ongoing call to the neighboring cell is a load increase suppressing signal; the cells whose RUN value are below the predetermined threshold are viewed as being in idle state).

(2) with regard to claims 7 and 11:

Eriksson et al. further discloses transmitting information on the access-attempting wireless local area network terminals to the other idle access points, and the idle access points attempt access to the wireless local area network terminals (paragraph [0030]).

(3) with regard to claim 15:

Eriksson et al. further discloses periodically receiving the load state information from the access points; detecting timed changing values of load values by using the load state information periodically received from the access points; transmitting a signal for requesting to transmit the load state information to access points whose timed changing values are more than a predetermined value, when the timed changing values of the detected load values are more than the predetermined value; generating load state information messages including the load state information by the access points receiving the signal for requesting to transmit the load state information; and monitoring load states of the access points according to the load state information messages generated from the access points (paragraph [0026]).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2, 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al. (US 2001/0012778) in view of Lor et al. (US 2004/0068668), de Seze (US 5,894,472) and Dillion (US 6,338,131).

(1) with regard to claims 2, 14 and 24:

Eriksson et al. does not disclose load state information transmitted to the management system from the wireless local area network access points includes the

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number of accessed wireless local area network terminals, the number of wireless local area network terminals recently generating data traffic, the number of data frames, and data frame length.

Lor et al. teaches using information about the number of accessed wireless local area network terminals and the number of data frames (paragraph [0109]). It would have been desirable to utilize information about the number of accessed wireless local area network terminals and the number of data frames about a network because knowing such information would allow the network to have a better knowledge of the current status of the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by Lor et al. in the system of Eriksson et al.

de Seze teaches using information about the number of wireless local area network terminals recently generating data traffic (column 10, lines 35 – 38). It would have been desirable to utilize information about the number of wireless local area network terminals recently generating data traffic about a network because knowing such information would allow the network to have a better knowledge of the current status of the network thus would make better decision in change in the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by de Seze in the system of Eriksson et al.

Dillion teaches using information about data frame length (column 9, line 60). It would have been desirable to utilize information about the data frame length because knowing such information would allow the network to have a better knowledge of current

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usage of network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by Dillion in the system of Eriksson et al.

11. Claims 3, 8, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al. (US 2001/0012778) in view of Sato et al. (US 2002/0128907).

(1) with regard to claims 3 and 17:

Eriksson et al. does not disclose transmitting an authentication failure message according to an authentication request of the wireless local area network terminals attempting the access.

Sato et al. teaches transmitting an authentication failure message according to an authentication request of the wireless local area network terminals attempting the access (paragraph [0112]).

It would have been desirable to transmit an authentication failure message according to an authentication request of the wireless local area network terminals attempting the access because it would improve the security of the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by Sato et al. in the system of Eriksson et al.

(2) with regard to claims 8 and 20:

Eriksson et al. further discloses transmitting information on the access-attempting wireless local area network terminals to the other idle access points, and the idle access points attempt access to the wireless local area network terminals (paragraph [0030]).

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12. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al. (US 2001/0012778) in view of Lor et al. (US 2004/0068668), de Seze (US 5,894,472) and Dillion (US 6,338,131) and further in view of Sato et al. (US 2002/0128907).

(1) with regard to claim 25:

Eriksson et al. does not disclose transmitting an authentication failure message according to an authentication request of the wireless local area network terminals attempting the access.

Sato et al. teaches transmitting an authentication failure message according to an authentication request of the wireless local area network terminals attempting the access (paragraph [0112]).

It would have been desirable to transmit an authentication failure message according to an authentication request of the wireless local area network terminals attempting the access because it would improve the security of the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by Sato et al. in the system of Eriksson et al.

13. Claims 4, 12, 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al. (US 2001/0012778) in view of Christensen et al. (US 5,764,634) and Merchant et al. (US 6,732,184).

(1) with regard to claims 4 and 18:

Eriksson et al. does not disclose deleting network node addresses of the wireless local area network terminals by basic service set tables and intercepting the access of

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the wireless local area network terminals, when the wireless local area network terminals, which do not continuously generate data traffic and keep accessing, generate the data traffic.

Christensen et al. teaches deleting network node addresses of the wireless local area network terminals by basic service set table (column 4, lines 28 – 32). It would have been desirable to delete network node addresses of the wireless local area network terminals by basic service set tables because it would allow resource of the table to be used by other users thus makes the system more efficient. Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by Christensen et al. in the system of Eriksson et al.

Merchant et al. teaches intercepting the access of the wireless local area network terminals, when the wireless local area network terminals, which do not continuously generate data traffic and keep accessing, generate the data traffic (column 8, lines 38 – 47). It would have been desirable to intercept the access of the wireless local area network terminals, when the wireless local area network terminals, which do not continuously generate data traffic and keep accessing, generate the data traffic because it would make the system more efficient by limiting the resource available to users who are less active. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by Merchant et al. in the system of Eriksson et al.

(2) with regard to claims 12 and 22:

Eriksson et al. further discloses transmitting information on the access-attempting wireless local area network terminals to the other idle access points, and the idle access points attempt access to the wireless local area network terminals (paragraph [0030]).

14. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al. (US 2001/0012778) in view of Lor et al. (US 2004/0068668), de Seze (US 5,894,472), Dillion (US 6,338,131) and Sato et al. (US 2002/0128907) and further in view of Christensen et al. (US 5,764,634) and Merchant et al. (US 6,732,184

(1) with regard to claim 26:

Eriksson et al. does not disclose deleting network node addresses of the wireless local area network terminals by basic service set tables and intercepting the access of the wireless local area network terminals, when the wireless local area network terminals, which do not continuously generate data traffic and keep accessing, generate the data traffic.

Christensen et al. teaches deleting network node addresses of the wireless local area network terminals by basic service set table (column 4, lines 28 – 32). It would have been desirable to delete network node addresses of the wireless local area network terminals by basic service set tables because it would allow resource of the table to be used by other users thus makes the system more efficient. Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by Christensen et al. in the system of Eriksson et al.

Merchant et al. teaches intercepting the access of the wireless local area network terminals, when the wireless local area network terminals, which do not continuously

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generate data traffic and keep accessing, generate the data traffic (column 8, lines 38 – 47). It would have been desirable to intercept the access of the wireless local area network terminals, when the wireless local area network terminals, which do not continuously generate data traffic and keep accessing, generate the data traffic because it would make the system more efficient by limiting the resource available to users who are less active. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by Merchant et al. in the system of Eriksson et al.

15. Claims 16, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al. (US 2001/0012778) in view of Langberg et al. (US 5,852,630).

(1) with regard to claim 27:

Eriksson et al. discloses a system and method, comprising: a plurality of wireless local area network terminals having wireless local area network interfaces and receiving a wireless local area network service (mobile terminal 245 on Fig. 2; although one mobile terminal is shown in a cell, it is inherent that each cell 110b controlled by a BSC 150 has more than one such mobile terminal); a plurality of access points providing the wireless local area network service to the wireless local area network terminals (BSCs, 150 and 155 on Fig. 2), periodically transmitting load state information (paragraph [0028], load indication message is periodically transmitted), and suppressing an increase of load when a load suppressing signal is received (paragraph [0030], the RUN of the cell is below the predetermined threshold is the load suppressing signal, when that signal is received); and a management system comparatively evaluating load

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states of each access point by receiving the load state information from the access points, and transmitting a load increase suppressing signal to access points whose load values are more than a threshold value, when there are access points whose load values are more than the threshold value and other access points around the access points whose load values are more than the threshold value are in idle state (paragraph [0030], the signal for ordering the cell whose RUN is greater than a threshold to transfer an ongoing call to the neighboring cell is a load increase suppressing signal; the cells whose RUN value are below the predetermined threshold are viewed as being in idle state).

However, Eriksson et al. does not teach using a computer readable medium having computer executable instructions for performing the method as discussed above.

Langberg et al. teaches a method for a transceiver warm start activation procedure can be implemented in software stored in a computer-readable medium. The computer-readable medium is an electronic, magnetic, optical, or other physical device or means that can contain or store a computer program for use by or in connection with a computer-related system or method (column 3, lines 51-65). Using a computer readable medium with program instruction code would be desirable because it would perform the same function of using hardware but offer the advantage of less expense, adaptability and flexibility. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the limitation as taught by Langberg et al. into the system of Eriksson et al. so as to reduce cost and improve the adaptability and flexibility of the logic simulation.

(2) with regard to claims 16 and 29:

Eriksson et al. discloses a system and method, comprising: a plurality of wireless local area network terminals having wireless local area network interfaces and receiving a wireless local area network service (mobile terminal 245 on Fig. 2; although one mobile terminal is shown in a cell, it is inherent that each cell 110b controlled by a BSC 150 has more than one such mobile terminal); a plurality of access points providing the wireless local area network service to the wireless local area network terminals (BSCs, 150 and 155 on Fig. 2), periodically transmitting load state information (paragraph [0028], load indication message is periodically transmitted), and suppressing an increase of load when a load suppressing signal is received (paragraph [0030], the RUN of the cell is below the predetermined threshold is the load suppressing signal, when that signal is received); and a management system comparatively evaluating load states of each access point by receiving the load state information from the access points, and transmitting a load increase suppressing signal to access points whose load values are more than a threshold value, when there are access points whose load values are more than the threshold value and other access points around the access points whose load values are more than the threshold value are in idle state (paragraph [0030], the signal for ordering the cell whose RUN is greater than a threshold to transfer an ongoing call to the neighboring cell is a load increase suppressing signal; the cells whose RUN value are below the predetermined threshold are viewed as being in idle state).

However, Eriksson et al. does not teach a repeating process when there is no neighboring idle access point; and using a computer readable medium having computer executable instructions for performing the method.

Langberg et al. teaches using a repeating process in his method (Fig. 5), where if a standby request is not sent the system would go back and repeat the previous action, but when a standby request is sent the program will stop the repeating process and proceed to the next step. This method would be desirable because it would make the system more efficient and robust as the system would react according to the current condition of the system. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the limitation as taught by Langberg et al. into the system of Eriksson et al.

Langberg et al. teaches a method for a transceiver warm start activation procedure can be implemented in software stored in a computer-readable medium. The computer-readable medium is an electronic, magnetic, optical, or other physical device or means that can contain or store a computer program for use by or in connection with a computer-related system or method (column 3, lines 51-65). Using a computer readable medium with program instruction code would be desirable because it would perform the same function of using hardware but offer the advantage of less expense, adaptability and flexibility. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the limitation as taught by Langberg et al. into the system of Eriksson et al. so as to reduce cost and improve the adaptability and flexibility of the logic simulation.

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16. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al. (US 2001/0012778) in view of Langberg et al. (US 5,852,630) and further in view of Lor et al. (US 2004/0068668), de Seze (US 5,894,472) and Dillion (US 6,338,131).

(1) with regard to claim 28:

Eriksson et al. in view of Langberg et al. discloses all of the subject matter as discussed above. Eriksson et al. does not disclose load state information transmitted to the management system from the wireless local area network access points includes the number of accessed wireless local area network terminals, the number of wireless local area network terminals recently generating data traffic, the number of data frames, and data frame length.

Lor et al. teaches using information about the number of accessed wireless local area network terminals and the number of data frames (paragraph [0109]). It would have been desirable to utilize information about the number of accessed wireless local area network terminals and the number of data frames about a network because knowing such information would allow the network to have a better knowledge of the current status of the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by Lor et al. in the system of Eriksson et al.

de Seze teaches using information about the number of wireless local area network terminals recently generating data traffic (column 10, lines 35 – 38). It would have been desirable to utilize information about the number of wireless local area network terminals recently generating data traffic about a network because knowing

such information would allow the network to have a better knowledge of the current status of the network thus would make better decision in change in the network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by de Seze in the system of Eriksson et al.

Dillion teaches using information about data frame length (column 9, line 60). It would have been desirable to utilize information about the data frame length because knowing such information would allow the network to have a better knowledge of current usage of network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the method as taught by Dillion in the system of Eriksson et al.

Allowable Subject Matter

17. Claims 5, 6, 9, 10, 19 and 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bo Hui A. Zhu whose telephone number is (571)270-1086. The examiner can normally be reached on Mon-Thur 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571)272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BZ
June 18, 2007



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